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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,801	11/19/2003	Su-Gwan Kim	03-702	8663

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EXAMINER	
WARE, DEBORAH K	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,801	KIM ET AL.	
	Examiner	Art Unit	
	Deborah K. Ware	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *6-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-11 are pending.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-5, in the reply filed on November 10, 2004 is acknowledged. The traversal is on the ground(s) that the steps are required of the product claims. This is not found persuasive because the steps as required by the product claims do not involve the same sequence of steps as the process claims, and in addition the process claims require an additional step not required of the steps for the product by process claim and that is the removing of impurities. There is one way distinctness between the two groups as indicated by their separate classification. A reference which may read on Group II will not necessarily read on Group I.

The requirement is still deemed proper and is therefore made FINAL.

Claims 6-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 10, 2004.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a restoring and grafting material for hard tissue defects using animal teeth mixed with gypsum, concentrated platelets, dental porcelain and acrylic resin, does not reasonably provide enablement for the same material when it is not mixed with the material selected from the group consisting of gypsum, concentrated platelets, dental porcelain and acrylic resin. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to carry out and practic the invention commensurate in scope with these claims. Applicants' own specification discloses at page 8, lines 15-20, that the restorative and grafting material for hard tissue defects prepared using animal teeth is limited in its use.

Therefore, it would be unpredictable in the art whether or not, the material prepared from animal teeth alone would even provide stable grafting, therefore. Further, there would be undue burden of experimentation required for one of skill to provide for such material since the powder itself would not stay in the right position for it to attach to a hard tissue defect area if not applied in the required ratios, in order to render its restorative and grafting properties as claimed. Therefore, the claim should be limited to mixing it with a material selected from the group consisting of medical gypsum, concentrated platelets, dental porcelain and acrylic resin at the required ratios.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rendered vague and indefinite for the recitation of ", and especially is characterized by having even powder form" wherein the phrase renders the claim unclear as to whether a powder is formed or not and if so is it formed from the animal teeth? Therefore, it is suggested to change the phrase to –of said material prepared from animal teeth, to provide for the restorative and grafting material in powder form--.

Claim 2 is rendered vague and indefinite for the recitation of an incomplete Markush Group type language "selected from consisting of" at line . It is suggested to insert –the group—before "consisting" at line 5. Further, the language "to attach hard tissue defect area" is awkwardly phrased and difficult to understand so it renders the claim unclear.

Claim 4 is indefinite for being unclear with respect to the powder containing 5-15 cc of concentrated platelets regardless of the amount of powder. Is the powder mixed with the platelets as in claim 2 or what? The metes and bounds of the claims can not be determined.

Claim 5 is rendered vague and indefinite for reasons set forth above and hence because it is a rejected base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Ment (2,508,816) in view of Hood, III (5,733,545) and Oden et al (5,217,375).

Claims are drawn to animal teeth prepared into a powder mixed with dental porcelain, acrylic resin, concentrated platelets and/or gypsum in varied ratio amounts of one to the other.

De Ment teaches animal teeth prepared into a powder mixed with acrylic resin. The method steps are taught to be well known in the art for preparing the tooth powder, note colum 3, line 28 and lines 66-70 and column 8, lines 5-10.

Hood III teaches concentrated platelets for hard tissue or bone grafting, note column 18, lines 55-61.

Oden et al teach dental porcelain and gypsum, note column 3, line 23 and column 5, line 32.

The claims differ from De Ment in that concentrated platelets, dental porcelain and gypsum, as well as the desired ratio of powder to them and acrylic resin is not disclosed.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to mix not only acrylic resin with the animal teeth powder disclosed by De Ment to repair a hard tissue defect area but to select other materials as disclosed by Hood III and Oden et al which are also useful for providing a stable material for hard tissue defects. De Ment clearly discloses the combined mixture as claimed, however, Hood III clearly teaches that concentrated platelets have wound healing properties and thus, one of skill would have been motivated to select for these materials as well since the hard tissue defect area would benefit from the wound healing properties of such a mixture. Also gypsum and dental porcelain are well known for their strength promoting abilities to hard tissue materials and to select for them would have also been an obvious modification of the cited prior art.

To vary the ratio of the powder to the material is clearly within the skill of an ordinary artisan. Optimal amounts of such mixtures are well known and one of skill would have been motivated to optimize the amounts of the mixture in order to provide for a stable restorative and grafting material. These amounts are well within the skill of an ordinary artisan to ascertain. To prepare the restorative and grafting material using well known method steps of collecting the teeth, removing soft tissue, sterilization and pulverizing with heat is suggested by the cited prior art. In the absence of persuasive evidence to the contrary the claims are rendered prima facie obvious over the cited prior art.

All claims fail to be patentably distinguishable over the state of the art discussed above and cited on the enclosed PTO-892 and/or PTO-1449. Therefore, the claims are properly rejected.

The remaining references listed on the enclosed PTO-892 and/or PTO-1449 are cited to further show the state of the art.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEBORAH K. WARE
PATENT EXAMINER

Deborah K. Ware
March 19, 2005